# Barriers of the Development and Implementation of Health Information Systems in Iran

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**Abstract :** Health information systems have great benefits for clinical and managerial processes of health care organizations. However, identifying and removing constraints and barriers of implementing and using health information systems before any implementation is essential. Physicians are one of the main users of health information systems, therefore, identifying the causes of their resistance and concerns about the barriers of the implementation of these systems is very important. So the purpose of this study was to determine the barriers of the development and implementation of health information systems in terms of the Iranian physicians' perspectives. In this study conducted in 8 selected hospitals affiliated to Tehran and Iran Universities of Medical Sciences, Tehran, Iran in 2014, physicians (GPs, residents, interns, specialists) in these hospitals were surveyed. In order to collect data, a research made questionnaire was used (Cronbach's α = 0.95). The instrument included 25 about organizational (9), personal (4), moral and legal (3) and technical barriers (9). Participants were asked to answer the questions using 5 point scale Likert (completely disagree=1 to completely agree=5). By using a simple random sampling method, 200 physicians (from 600) were invited to study that eventually 163 questionnaires were returned. We used mean score and t-test and ANOVA to analyze the data using SPSS software version 17. 52.1% of respondents were female. The mean age was 30.18 ± 7.29. The work experience years for most of them were between 1 to 5 years (80.4 percent). The most important barriers were organizational ones (3.4 ± 0.89), followed by ethical (3.18 ± 0.98), technical (3.06 ± 0.8) and personal (3.04 ± 1.2). Lack of easy access to a fast Internet (3.67±1.91) and the lack of exchanging information (3.61±1.2) were the most important technical barriers. Among organizational barriers, the lack of efficient planning for the development and implementation systems (3.56±1.32) and was the most important ones. Lack of awareness and knowledge of health care providers about the health information systems features (3.33±1.28) and the lack of physician participation in planning phase (3.27±1.2) as well as concerns regarding the security and confidentiality of health information (3.15 ± 1.31) were the most important personal and ethical barriers, respectively. Women (P = 0.02) and those with less experience (P = 0.002) were more concerned about personal barriers. GPs also were more concerned about technical barriers (P = 0.02). According to the study, technical and ethics barriers were considered as the most important barriers however, lack of awareness in target population is also considered as one of the main barriers. Ignoring issues such as personal and ethical barriers, even if the necessary infrastructure and technical requirements were provided, may result in failure. Therefore, along with the creating infrastructure and resolving organizational barriers, special attention to education and awareness of physicians and providing solution for ethics concerns are necessary.